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Communiqué

Public Health Research, Education and
Development Program



Kingston, Frontenac, Lennox
& Addington Health Unit

INFLUENZA CASES IN KINGSTON, FRONTENAC AND LENNOX AND ADDINGTON HEALTH UNIT, OCTOBER 01/01 - APRIL 30/02

Background

As part of the Ministry of Health and Long-Term Care's Mandatory Program Guidelines, the Kingston, Frontenac and Lennox & Addington (KFL&A) Health Unit records and reports every confirmed case of influenza through the Reportable Diseases Information System (RDIS). Information recorded into RDIS includes demographic information, virus serotype, probable location of contract, laboratory confirmation method used, complications and/or adverse outcomes (e.g., death), and prior vaccination status.

Objectives

To establish trends in person, place and time relating to influenza cases in the KFL&A region during the 2001-2002 influenza season.

Methods

Using the Reportable Disease Information System (RDIS), all confirmed cases of Influenza A and B within the KFL&A geographic region from October 1, 2001 to April 30, 2002 were extracted. The following variables were selected: Case date, date of birth, influenza type, vaccination status, risk setting, and whether complications or death occurred as a result of influenza contraction.

Using the case date and date of birth, we were able to calculate the age of each person at the time when influenza symptomatology began.

From these data, we set out to establish trends in person,

place and time relating to influenza cases in the KFL&A region between October 01, 2001 and April 30, 2002.

Results

Influenza A

A total of 65 cases of Influenza A were identified during this time period. Thirty-three cases (50.8%) were confirmed with Ag Detection, 13 (20.0%) were confirmed with virus isolation, and 19 (29.2%) cases were confirmed using both methods.

Of these 65 individuals, 23 (35.4%) were vaccinated, 41 were not, and the vaccination status for one was unknown. The ages of vaccinated and unvaccinated cases differed significantly. The mean age for the vaccinated cases was 71.9 years (95% CI= 59.3, 84.5) while the mean age for non-vaccinated cases was 30.4 years (CI=22.3, 38.5). The largest proportion of Influenza A cases occurred in a residential facility (35.4%), followed by those whose risk setting was identified as school (26.2%).

Vaccination rates varied from location to location. Residential facilities had the highest percentage of vaccination, with 82.6% of cases having been vaccinated prior to illness. Conversely, schools had the lowest vaccination rates with only 5.9% of all cases being vaccinated prior to illness.

Of 65 Influenza A cases, 3 resulted in death. One involved an unvaccinated 4-month old baby living at home. The remaining two cases were elderly individuals (81 and 86 years old) living in a residential facility, one of whom had been vaccinated against influenza.

An additional 3 individuals were reported as having pneumonia complications. The youngest was an adult who identified the workplace as the risk setting, while the 2 other cases were elderly individuals who lived in a residential facility.

Influenza B

A total of 14 cases of Influenza B were confirmed during this time period. Thirteen cases were confirmed via virus detection alone and 1 case was confirmed via AG detect.

Of these 14 cases, 2 (14.3%) were vaccinated, and 12 were not. Of the vaccinated cases, one was in the 0-4 and one in the 20-24 age groups. The mean age for non-vaccinated cases was 14.0 years (CI=7.5, 20.4). Unlike with Influenza A cases, the age distribution of cases of Influenza B was much narrower, with the eldest case being 26 years of age at time of case ascertainment. Schools were

reported as the risk setting for the largest number of cases (42.9%), followed by homes (21.4%).

It should also be noted that no cases of Influenza B resulted in death or complications.

Observations

Influenza A

The mean ages of vaccinated and unvaccinated cases of Influenza A were significantly different at 71.9 years and 30.6 years, respectively.

The largest percentage of cases occurred in individuals aged 65 and above (38.5%). Of these 18 cases, 80.0% lived in a residential facility, and the remaining 20.0% reporting contracting the illness at home.

The majority of cases under the age of 65 were not vaccinated prior to confirmation of illness, while nearly three quarters (72.0%) of those 65 and above had been. In addition, 90% of residential facility cases aged 65 and above were vaccinated. The large proportion of these vaccinated cases may have occurred because institutionalized residents were vaccinated in November 2001, and the immunization is effective for only 3-4 months, thereby increasing their susceptibility to influenza in March and April. This may also explain the large difference in mean age between vaccinated and unvaccinated cases.

Influenza B

Firstly, it is important to note that the total number of Influenza B cases was small, so the results should be interpreted with caution.

Influenza B seemed to affect younger individuals. It appears that Influenza B's primarily affected school-aged children. In addition, no cases resulted in fatality or complications and the numbers were lower despite a lower total percentage of vaccinated cases (14.3%).

Conclusion

Influenza A is the more virulent of the two types of influenza. cases reported to RDIS since October 2001, especially in institutional settings, reflect this fact. During this period there were a total of 79 cases, 65 of whom were positively identified as Influenza A, and an additional 14 cases identified as Influenza B. Three cases of Influenza A resulted in death, and an additional 3 cases were reported as having suffered from complications, in this case pneumonia.

It should be noted that the numbers reported here are con-

firmed cases which may not be an accurate reflection of the burden of illness in the population. Younger cases or cases living in places other than residential settings may not request medical attention for their illness, thereby resulting in a lower number of reported younger/non-residential cases. In addition, because residents of facilities are under frequent medical scrutiny, it is likely that these cases were more frequently reported than cases in the general population, and were also tested more often.

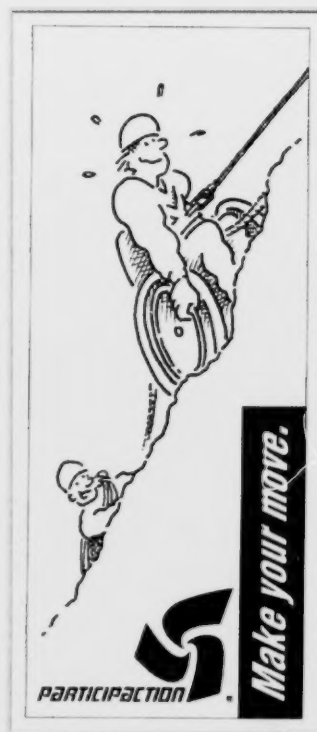
Despite these caveats, some interesting trends and questions have been identified and warrant additional research:

- Whether older individuals, especially those living in a residential setting should be vaccinated twice per influenza season - once just prior to influenza season, and again 3-4 months later, at which point their immunization will likely have worn off, when Influenza continues to be a concern;
- Whether cases who had been vaccinated prior to illness had milder symptoms than those who were not vaccinated.



SOURCE AND CONTACT

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KFL&A Health Unit



Summary of Reportable Diseases in Ontario - January, 2003

| Health Units by Region | Population 2000 | AIDS | Campylo. | Chicken pox | Chlamydia | Enceph/ Meningitis | GAS | Gonorrhoea |
|------------------------------|--------------------|-----------|------------|----------------|--------------|-----------------------|-----------|------------|
| Algoma | 125,109 | | 2 | 9 | 10 | 1 | 1 | 1 |
| North Bay | 93,505 | | 1 | 9 | 9 | | | |
| Northwestern | 91,920 | | | 7 | 23 | | | 3 |
| Porcupine | 93,680 | | 1 | 9 | 21 | | 1 | |
| Sudbury | 199,619 | | 1 | 1 | 25 | 1 | | 1 |
| Thunder Bay | 158,698 | | 1 | | 41 | | | 7 |
| Timiskaming | 37,721 | | | | 3 | | | |
| Total - Northern | 800,252 | | 6 | 35 | 132 | 2 | 2 | 12 |
| Eastern Ontario | 194,945 | | 5 | 1 | 8 | | | |
| Hastings & Prince Edward | 159,088 | | 1 | | 24 | | 1 | 1 |
| Kingston, Frontenac & Lennox | 180,225 | | | 3 | 35 | 1 | 2 | |
| Leeds, Grenville & Lanark | 163,143 | | 2 | | | | 2 | |
| Ottawa | 779,274 | | 21 | 64 | 114 | 3 | 2 | 13 |
| Renfrew | 101,131 | | 1 | 1 | 2 | | 1 | |
| Total - Eastern | 1,577,806 | | 30 | 69 | 183 | 4 | 6 | 14 |
| Durham | 512,271 | | 3 | 196 | 52 | 1 | 3 | 4 |
| Haliburton-Kawartha | 168,120 | | 3 | | 4 | 1 | 1 | |
| Muskoka-Parry Sound | 86,218 | | | 2 | 3 | | | |
| Peel | 1,008,163 | 1 | 33 | 132 | 108 | 1 | 3 | 20 |
| Peterborough | 128,881 | | 2 | 4 | 15 | | | 1 |
| Simcoe | 377,405 | | 5 | 8 | 7 | | | |
| Toronto - total | 2,542,844 | 4 | 69 | 158 | 585 | 7 | 6 | 137 |
| North | 627,021 | | 14 | 41 | 122 | 1 | 2 | 26 |
| South | 688,584 | 2 | 27 | 40 | 199 | 3 | 1 | 74 |
| East | 717,937 | 1 | 15 | 58 | 155 | 2 | 2 | 25 |
| West | 509,302 | 1 | 13 | 19 | 109 | 1 | 1 | 12 |
| York | 724,969 | | 34 | | 42 | 2 | 3 | 7 |
| Total - Central East | 5,548,871 | 5 | 149 | 500 | 816 | 12 | 16 | 169 |
| Grey Bruce | 157,664 | | | 8 | 15 | | | |
| Elgin-St. Thomas | 84,182 | | | 24 | 7 | | | |
| Huron | 61,097 | | 1 | | 2 | | | |
| Chatham-Kent | 112,897 | | 1 | | 2 | 1 | | |
| Lambton | 131,643 | | | | 2 | | | |
| Middlesex-London | 412,976 | | 4 | | 28 | | 1 | 8 |
| Oxford | 102,561 | | 1 | | 10 | | 1 | 1 |
| Perth | 75,238 | | | 16 | 7 | | | |
| Windsor-Essex | 381,672 | | 8 | | 42 | | 3 | 6 |
| Total - Southwest | 1,519,930 | | 15 | 48 | 115 | 1 | 5 | 15 |
| Brant | 126,481 | | | 43 | 16 | | 3 | |
| Haldimand-Norfolk | 109,536 | | 3 | 25 | 9 | | 1 | |
| Halton | 375,705 | | 3 | | 11 | 1 | 1 | 2 |
| Hamilton | 498,553 | 1 | 8 | 14 | 79 | | 4 | 5 |
| Niagara | 423,600 | | 8 | | 43 | | 3 | 7 |
| Waterloo | 446,833 | 1 | 5 | 36 | 69 | 2 | 8 | 3 |
| Wellington-Dufferin-Guelph | 241,777 | | 3 | 18 | 18 | 1 | 2 | |
| Total - Central West | 2,222,485 | 2 | 30 | 136 | 245 | 4 | 22 | 17 |
| January 2003 | 11,669,344 | 7 | 230 | 768 | 1,491 | 23 | 53 | 227 |
| * Total YTD 2003 | - | 7 | 230 | 768 | 1,491 | 23 | 53 | 227 |
| * Total YTD 2002 | - | 11 | 270 | 1,373 | 1,591 | 34 | 46 | 308 |

The Toronto City regions above are now defined as: North - former North York; South - former City of Toronto; West - former Etobicoke and City of York; East - former Scarborough and East York

** Infectious syphilis cases include 'Primary, Secondary and Early Latent' staging effective January 1, 2003

* Adjusted for deletions and late reports.

Summary of Reportable Diseases in Ontario - January, 2003

| Health Units by Region | Population 2000 | Hepatitis A | Hepatitis B | Hepatitis C | Hib | Influenza | Measles | Meningo- coccal |
|------------------------------|--------------------|----------------|----------------|----------------|----------|------------|---------|--------------------|
| Algoma | 125,109 | | | 10 | | | | |
| North Bay | 93,505 | | | 4 | | 2 | | |
| Northwestern | 91,920 | | | 1 | | | | |
| Porcupine | 93,680 | | | 2 | | 5 | | |
| Sudbury | 199,619 | | | 9 | | 4 | | |
| Thunder Bay | 158,698 | | | 4 | | | | |
| Timiskaming | 37,721 | | | | | 3 | | |
| Total - Northern | 800,252 | | | 30 | | 14 | | |
| Eastern Ontario | 194,945 | | 1 | 1 | 1 | 4 | | |
| Hastings & Prince Edward | 159,088 | | | 2 | | 1 | | |
| Kingston, Frontenac & Lennox | 180,225 | | | 2 | | 9 | | |
| Leeds, Grenville & Lanark | 163,143 | | | 5 | | 2 | | |
| Ottawa | 779,274 | | | 44 | | 6 | | |
| Renfrew | 101,131 | | | | | 2 | | 1 |
| Total - Eastern | 1,577,806 | | 1 | 54 | 1 | 24 | | 1 |
| Durham | 512,271 | 1 | | | | 4 | | |
| Haliburton-Kawartha | 168,120 | | | 6 | | 5 | | |
| Muskoka-Parry Sound | 86,218 | | | | | 3 | | |
| Peel | 1,008,163 | 1 | 1 | 24 | | 26 | | 1 |
| Peterborough | 128,881 | | | 8 | | 2 | | |
| Simcoe | 377,405 | | | 20 | | 5 | | |
| Toronto - total | 2,542,844 | 3 | 6 | 134 | | 17 | | 1 |
| North | 627,021 | | 3 | 26 | | 2 | | |
| South | 688,584 | 1 | 3 | 55 | | 5 | | |
| East | 717,937 | 2 | | 26 | | 7 | | 1 |
| West | 509,302 | | | 27 | | 3 | | |
| York | 724,969 | | | 16 | | 10 | | 1 |
| Total - Central East | 5,548,871 | 5 | 7 | 208 | | 72 | | 3 |
| Grey Bruce | 157,664 | | 1 | 3 | | 3 | | |
| Elgin-St. Thomas | 84,182 | | | 3 | | | | |
| Huron | 61,097 | | | | | | | |
| Chatham-Kent | 112,897 | | | 5 | | | | |
| Lambton | 131,643 | | | | | 7 | | |
| Middlesex-London | 412,976 | | | 13 | | 1 | | |
| Oxford | 102,561 | | | 1 | | 7 | | |
| Perth | 75,238 | | | 1 | | 3 | | |
| Windsor-Essex | 381,672 | | | 17 | | 1 | | |
| Total - Southwest | 1,519,930 | | 1 | 43 | | 22 | | |
| Brant | 126,481 | | | 6 | | 4 | | |
| Haldimand-Norfolk | 109,536 | | | 1 | | 7 | | |
| Halton | 375,705 | | | 9 | | 3 | | 2 |
| Hamilton | 498,553 | | | 22 | | 15 | | |
| Niagara | 423,600 | 1 | 1 | 34 | | 4 | | |
| Waterloo | 446,833 | | | 9 | | 3 | | |
| Wellington-Dufferin-Guelph | 241,777 | | | 3 | | 10 | | |
| Total - Central West | 2,222,485 | 1 | 1 | 84 | | 46 | | 2 |
| January 2003 | 11,669,344 | 6 | 10 | 419 | 1 | 178 | | 6 |
| * Total YTD 2003 | - | 6 | 10 | 419 | 1 | 178 | | 6 |
| * Total YTD 2002 | - | 11 | 14 | 488 | | 271 | | 4 |

The Toronto City regions above are now defined as: North - former North York; South - former City of Toronto; West - former Etobicoke and City of York; East - former Scarborough and East York

** Infectious syphilis cases include 'Primary, Secondary and Early Latent' staging effective January 1, 2003

* Adjusted for deletions and late reports.

Summary of Reportable Diseases in Ontario - January, 2003

| Health Units by Region | Population 2000 | Mumps | Pertussis | Rubella | Sabnon. | Shigellosis | Syphilis Infectious ** | VTEC |
|------------------------------|--------------------|----------|-----------|----------|------------|-------------|---------------------------|-----------|
| Algoma | 125,109 | | 1 | | | | | |
| North Bay | 93,505 | | | | 1 | | | |
| Northwestern | 91,920 | | | | | | | |
| Porcupine | 93,680 | | 2 | | 1 | | | |
| Sudbury | 199,619 | | | | 2 | | | |
| Thunder Bay | 158,698 | | | | | | | |
| Timiskaming | 37,721 | | | | | | | |
| Total - Northern | 800,252 | | 3 | | 4 | | | |
| Eastern Ontario | 194,945 | | | | 1 | | | 1 |
| Hastings & Prince Edward | 159,083 | | | | 2 | | | |
| Kingston, Frontenac & Lennox | 180,225 | | | | | | | |
| Leeds, Grenville & Lanark | 163,143 | | | | 1 | | | |
| Ottawa | 779,274 | | 7 | | 11 | 2 | | |
| Renfrew | 101,131 | 1 | | | | | | |
| Total - Eastern | 1,577,806 | 1 | 7 | | 15 | 2 | | 1 |
| Durham | 512,271 | | | | 7 | 1 | | |
| Haliburton-Kawartha | 168,120 | | | | | | | |
| Muskoka-Parry Sound | 86,218 | | | | | | | |
| Peel | 1,008,163 | | 3 | | 19 | 6 | 1 | 1 |
| Peterborough | 128,881 | | | | | | | 1 |
| Simcoe | 377,405 | | | | 5 | | | |
| Toronto - total | 2,542,844 | | | 1 | 31 | 6 | 17 | |
| North | 627,021 | | | 1 | 12 | 2 | | |
| South | 688,584 | | | | 9 | 1 | 17 | |
| East | 717,937 | | | | 5 | 2 | | |
| West | 509,302 | | | | 5 | 1 | | |
| York | 724,969 | | | | 23 | 3 | | |
| Total - Central East | 5,548,871 | | 3 | 1 | 85 | 16 | 18 | 2 |
| Grey Bruce | 157,664 | | | | | | | |
| Elgin-St. Thomas | 84,182 | | | | | | | |
| Huron | 61,097 | | | | 1 | | | |
| Chatham-Kent | 112,897 | | | | | 1 | | |
| Lambton | 131,643 | | | | | | | |
| Middlesex-London | 412,976 | | | | | | | |
| Oxford | 102,561 | | | | | | | |
| Perth | 75,238 | | | | | | | |
| Windsor-Essex | 381,672 | | | | 4 | 1 | | 1 |
| Total - Southwest | 1,519,930 | | | | 5 | 2 | | 1 |
| Brant | 126,481 | | | | | | | 1 |
| Haldimand-Norfolk | 109,536 | | | | | | | |
| Halton | 375,705 | | 4 | | 3 | | | |
| Hamilton | 498,553 | | 1 | | 5 | 1 | | 65 |
| Niagara | 423,600 | 1 | | | 10 | 1 | 1 | 1 |
| Waterloo | 446,833 | | 1 | | 4 | | | |
| Wellington-Dufferin-Guelph | 241,777 | | | | | | | |
| Total - Central West | 2,222,485 | 1 | 6 | | 22 | 2 | 1 | 67 |
| January 2003 | 11,669,344 | 2 | 19 | 1 | 131 | 22 | 19 | 71 |
| * Total YTD 2003 | - | 2 | 19 | 1 | 131 | 22 | 19 | 71 |
| * Total YTD 2002 | - | 3 | 50 | | 190 | 25 | 5 | 11 |

The Toronto City regions above are now defined as: North - former North York; South - former City of Toronto; West - former Etobicoke and City of York; East - former Scarborough and East York

** Infectious syphilis cases include 'Primary, Secondary and Early Latent' staging effective January 1, 2003

Summary of Reportable Diseases

4th Quarter, 2002

Ministry of Health and Long-Term Care



Ontario

Summary of Reportable Diseases in Ontario - 4th Quarter 2002

| Health Units by Region | Population 2000 | AIDS | Campylo. | Chicken pox | Chlamydia | Enceph/ Meningitis | GAS | Gonorrhea |
|------------------------------|--------------------|------------|--------------|----------------|---------------|-----------------------|------------|--------------|
| Algoma | 125,109 | | 4 | 61 | 57 | | 2 | 3 |
| North Bay | 93,505 | | 5 | 19 | 29 | 1 | 3 | |
| Northwestern | 91,920 | | | 7 | 38 | | | 3 |
| Porcupine | 93,680 | | 3 | 132 | 29 | | | |
| Sudbury | 199,619 | | 7 | 5 | 81 | 1 | 2 | 3 |
| Thunder Bay | 158,698 | | 10 | | 89 | | 1 | 15 |
| Timiskamung | 37,721 | | | | 14 | | | |
| Total - Northern | 800,252 | | 29 | 224 | 337 | 2 | 8 | 24 |
| Eastern Ontario | 194,945 | | 12 | 5 | 28 | 2 | 2 | 1 |
| Hastings & Prince Edward | 159,088 | | 9 | | 62 | | 1 | |
| Kingston, Frontenac & Lennox | 180,225 | | | 24 | 81 | 4 | 3 | |
| Leeds, Grenville & Lanark | 163,143 | | 5 | | | | 1 | |
| Ottawa | 779,274 | 3 | 51 | 155 | 299 | 4 | 6 | 41 |
| Renfrew | 101,131 | | 2 | 3 | 22 | 1 | | |
| Total - Eastern | 1,577,806 | 3 | 79 | 187 | 492 | 11 | 13 | 42 |
| Durham | 512,271 | | 22 | 505 | 166 | 1 | 1 | 18 |
| Haliburton-Kawartha | 168,120 | | 14 | | 28 | 1 | | 1 |
| Muskoka-Parry Sound | 86,218 | | 1 | 3 | 19 | | 3 | 2 |
| Peel | 1,008,163 | 1 | 87 | 269 | 389 | 15 | 2 | 82 |
| Peterborough | 128,881 | | 3 | 78 | 54 | 2 | 2 | 4 |
| Simcoe | 377,405 | | 29 | 81 | 85 | 8 | 1 | 6 |
| Toronto - total | 2,542,844 | 14 | 286 | 476 | 1,563 | 30 | 28 | 453 |
| North | 627,021 | | 58 | 195 | 328 | 5 | 5 | 77 |
| South | 688,584 | 13 | 108 | 118 | 543 | 9 | 10 | 216 |
| East | 717,937 | 1 | 76 | 53 | 434 | 10 | 7 | 100 |
| West | 509,302 | | 44 | 110 | 258 | 6 | 6 | 60 |
| York | 724,969 | | 113 | | 159 | 6 | 5 | 14 |
| Total - Central East | 5,548,871 | 15 | 555 | 1,412 | 2,463 | 63 | 42 | 580 |
| Grey Bruce | 157,664 | | 4 | 5 | 22 | 1 | 1 | 1 |
| Elgin-St. Thomas | 84,182 | | 2 | 70 | 12 | | | 1 |
| Huron | 61,097 | | 5 | 26 | 8 | | 1 | 1 |
| Chatham-Kent | 112,897 | | 2 | 42 | 30 | 2 | | 1 |
| Lambton | 131,643 | | | | 1 | | | |
| Middlesex-London | 412,976 | 1 | 16 | | 164 | 8 | 4 | 28 |
| Oxford | 102,561 | | 6 | | 34 | 1 | | 4 |
| Perth | 75,238 | | 19 | 16 | 13 | | 1 | |
| Windsor-Essex | 381,672 | | 26 | 219 | 132 | 9 | 1 | 7 |
| Total - Southwest | 1,519,930 | 1 | 80 | 378 | 416 | 21 | 8 | 43 |
| Brant | 126,481 | | 6 | 61 | 57 | | 3 | 2 |
| Haldimand-Norfolk | 109,536 | 1 | 5 | 6 | 27 | | | |
| Halton | 375,705 | | 40 | 6 | 24 | 2 | 3 | |
| Hamilton | 498,553 | | 20 | 106 | 189 | 12 | 10 | 28 |
| Niagara | 423,600 | | 37 | 194 | 125 | 2 | 6 | 14 |
| Waterloo | 446,833 | 1 | 40 | 85 | 181 | 7 | 5 | 25 |
| Wellington-Dufferin-Guelph | 241,777 | | 17 | 24 | 70 | 2 | 1 | 2 |
| Total - Central West | 2,222,485 | 2 | 165 | 482 | 673 | 25 | 28 | 71 |
| 4th Quarter 2002 | 11,669,344 | 21 | 908 | 2,683 | 4,381 | 122 | 99 | 760 |
| * Total YTD 2002 | - | 101 | 4,520 | 14,953 | 17,929 | 838 | 375 | 3,035 |
| * Total YTD 2001 | - | 144 | 5,001 | 11,919 | 16,207 | 534 | 326 | 2,934 |

The Toronto City regions above are now defined as: North - former North York; South - former City of Toronto; West - former Etobicoke and City of York; East - former Scarborough and East York

* Adjusted for deletions and late reports.

Summary of Reportable Diseases in Ontario - 4th Quarter 2002

| Health Units by Region | Population 2000 | PPNG | Hepatitis A | Hepatitis B | Hepatitis C | HBs | Influenza | Measles | Meningococcal |
|------------------------------|-------------------|------------|-------------|-------------|--------------|----------|--------------|----------|---------------|
| Algoma | 125,109 | | | | 7 | | 6 | | |
| North Bay | 93,505 | | | | 3 | | 3 | | |
| Northwestern | 91,920 | | | | 7 | | | | |
| Porcupine | 93,680 | | | 1 | 4 | | | | |
| Sudbury | 199,619 | | 2 | 1 | 26 | | | | |
| Thunder Bay | 158,698 | 1 | | 1 | 21 | | | | |
| Timiskaming | 37,721 | | 1 | 1 | 2 | | | | |
| Total - Northern | 800,252 | 1 | 3 | 4 | 70 | | 9 | | |
| Eastern Ontario | 194,945 | | 1 | | 9 | | | | 1 |
| Hastings & Prince Edward | 159,088 | | 1 | 1 | 11 | | 3 | | 2 |
| Kingston, Frontenac & Lennox | 180,225 | | | 1 | 71 | | 1 | | 1 |
| Leeds, Grenville & Lanark | 163,143 | | 1 | 1 | 15 | | | | 1 |
| Ottawa | 779,274 | 3 | 1 | 1 | 98 | | 13 | 1 | 1 |
| Renfrew | 101,131 | | | | 5 | | 1 | | |
| Total - Eastern | 1,577,806 | 3 | 4 | 4 | 209 | | 18 | 1 | 6 |
| Durham | 512,271 | | 1 | | | | 29 | | |
| Haliburton-Kawartha | 168,120 | | | 1 | 22 | | 3 | | |
| Muskoka-Parry Sound | 86,218 | | | | 8 | | 4 | | |
| Peel | 1,008,163 | 1 | 8 | 2 | 121 | | 75 | | 2 |
| Peterborough | 128,881 | | | | 25 | | 1 | | 1 |
| Simcoe | 377,405 | 3 | | | 51 | | 11 | | |
| Toronto - total | 2,542,844 | 23 | 13 | 8 | 332 | | 121 | | 1 |
| North | 627,021 | 1 | | | 90 | | 26 | | |
| South | 688,584 | 18 | 8 | 3 | 117 | | 39 | | |
| East | 717,937 | 2 | 4 | 3 | 67 | | 22 | | |
| West | 509,302 | 2 | 1 | 2 | 58 | | 34 | | 1 |
| York | 724,969 | 4 | 3 | | 62 | | 33 | | |
| Total - Central East | 5,548,871 | 31 | 25 | 11 | 621 | | 277 | | 4 |
| Grey Bruce | 157,664 | | | | 12 | | 9 | | |
| Elgin-St. Thomas | 84,182 | | | | 8 | | 3 | | |
| Huron | 61,097 | | | | 2 | | 7 | | |
| Chatham-Kent | 112,897 | | | | 38 | | | | |
| Lambton | 131,643 | | | | | | 1 | | |
| Middlesex-London | 412,976 | 2 | | | 45 | | 5 | | 1 |
| Oxford | 102,561 | | | | 2 | | 14 | | |
| Perth | 75,238 | | | | 5 | | 16 | | |
| Windsor-Essex | 381,672 | | | | 45 | | 2 | | 1 |
| Total - Southwest | 1,519,930 | 2 | | | 157 | | 57 | | 2 |
| Brant | 126,481 | 1 | | 1 | 3 | 1 | 1 | | |
| Haldimand-Norfolk | 109,536 | | | 1 | 10 | | 6 | | |
| Halton | 375,705 | | 1 | 2 | 29 | | 21 | | |
| Hamilton | 498,553 | 1 | | 1 | 87 | 1 | 44 | | 2 |
| Niagara | 423,600 | | | 1 | 68 | 1 | 4 | | |
| Waterloo | 446,833 | 1 | | | 27 | | 24 | | |
| Wellington-Dufferin-Guelph | 241,777 | | | | 12 | | 36 | | 1 |
| Total - Central West | 2,222,485 | 3 | 1 | 6 | 236 | 3 | 136 | | 3 |
| 4th Quarter 2002 | 11,669,344 | 40 | 33 | 25 | 1,293 | 3 | 497 | 1 | 15 |
| * Total YTD 2002 | | 200 | 146 | 125 | 5,185 | 6 | 2,672 | 1 | 59 |
| * Total YTD 2001 | | 169 | 173 | 128 | 5,484 | 6 | 788 | 6 | 105 |

The Toronto City regions above are now defined as: North - former North York, South - former City of Toronto, West - former Etobicoke and City of York.

East - former Scarborough and East York

* Adjusted for deletions and late reports

Summary of Reportable Diseases in Ontario - 4th Quarter 2002

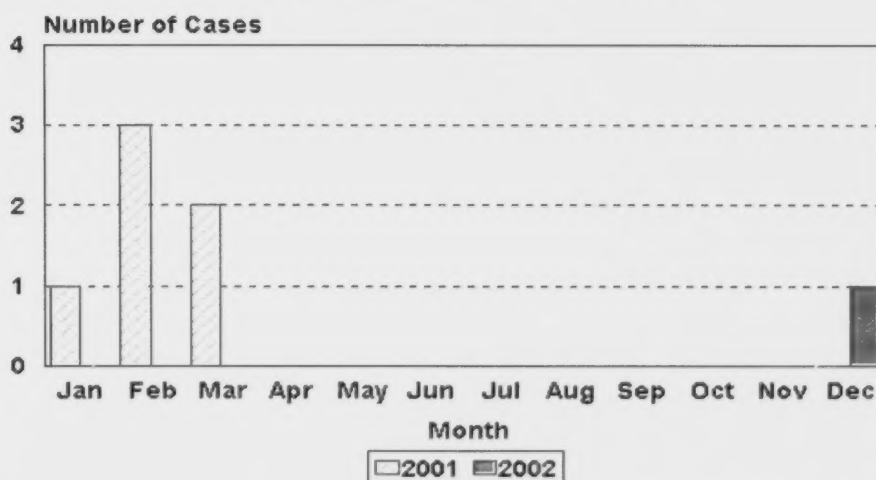
| Health Units by Region | Population 2000 | Mumps | Pertussis | Rubella | Salmon. | Shigellosis | Syphilis (Prim/Sec) | VTEC |
|------------------------------|-------------------|-----------|------------|-----------|--------------|-------------|---------------------|------------|
| Algoma | 125,109 | | 1 | | 4 | | | |
| North Bay | 93,505 | | 4 | | 6 | | | 2 |
| Northwestern | 91,920 | | | | | | | |
| Porcupine | 93,680 | | 7 | | | | | |
| Sudbury | 199,619 | | 6 | | 4 | | 1 | 3 |
| Thunder Bay | 158,698 | | 1 | | 8 | | | 2 |
| Timiskaming | 37,721 | | | | 2 | | | |
| Total - Northern | 800,252 | | 19 | | 24 | | 1 | 7 |
| Eastern Ontario | 194,945 | | 2 | | 6 | | | 2 |
| Hastings & Prince Edward | 159,088 | | 1 | | 8 | | | |
| Kingston, Frontenac & Lennox | 180,225 | | 4 | | | | | |
| Leeds, Grenville & Lanark | 163,143 | | 1 | | 1 | | | 1 |
| Ottawa | 779,274 | 1 | 18 | | 30 | 10 | 1 | 4 |
| Renfrew | 101,131 | | | | 2 | | | |
| Total - Eastern | 1,577,806 | 1 | 26 | | 47 | 10 | 1 | 7 |
| Durham | 512,271 | | | | 27 | 3 | 1 | 1 |
| Haliburton-Kawartha | 168,120 | | 4 | | 7 | | | 2 |
| Muskoka-Parry Sound | 86,218 | | 2 | | 3 | 2 | | |
| Peel | 1,008,163 | | 2 | | 44 | 8 | | 11 |
| Peterborough | 128,881 | 1 | 17 | | 2 | | | 1 |
| Simcoe | 377,405 | | 1 | | 7 | 1 | | 1 |
| Toronto - total | 2,542,844 | | 15 | | 139 | 32 | 66 | 8 |
| North | 627,021 | | 6 | | 37 | 3 | 2 | 2 |
| South | 688,584 | | | | 30 | 20 | 59 | 3 |
| East | 717,937 | | 5 | | 49 | 5 | 3 | 2 |
| West | 509,302 | | 4 | | 23 | 4 | 2 | 1 |
| York | 724,969 | | 9 | | 43 | 4 | 3 | 4 |
| Total - Central East | 5,548,871 | 1 | 50 | | 272 | 50 | 70 | 28 |
| Grey Bruce | 157,664 | | 2 | | 3 | | | 1 |
| Elgin-St. Thomas | 84,182 | | 3 | | | 1 | | |
| Huron | 61,097 | | 1 | | 4 | | | |
| Chatham-Kent | 112,897 | | 1 | | 2 | | | |
| Lambton | 131,643 | | | | | | | |
| Middlesex-London | 412,976 | | 1 | | 14 | | | |
| Oxford | 102,561 | | 2 | | 6 | | | 3 |
| Perth | 75,238 | | 7 | | 1 | | | |
| Windsor-Essex | 381,672 | | | | 32 | 1 | | 1 |
| Total - Southwest | 1,519,930 | | 17 | | 62 | 2 | | 5 |
| Brant | 126,481 | | | | 3 | | | 3 |
| Haldimand-Norfolk | 109,536 | 1 | | | 6 | | | 1 |
| Halton | 375,705 | | 2 | | 13 | 4 | | |
| Hamilton | 498,553 | | 2 | | 20 | 2 | | 5 |
| Niagara | 423,600 | | 1 | | 24 | 3 | | 8 |
| Waterloo | 446,833 | | 6 | | 20 | | | 2 |
| Wellington-Dufferin-Guelph | 241,777 | | 2 | | 8 | 1 | 1 | 2 |
| Total - Central West | 2,222,485 | 1 | 13 | | 94 | 10 | 1 | 21 |
| 4th Quarter 2002 | 11,669,344 | 3 | 125 | | 499 | 72 | 73 | 68 |
| * Total YTD 2002 | - | 14 | 506 | 2 | 2,390 | 844 | 174 | 370 |
| * Total YTD 2001 | - | 17 | 455 | 16 | 2,489 | 231 | 24 | 352 |

The Toronto City regions above are now defined as: North - former North York; South - former City of Toronto; West - former Etobicoke and City of York; East - former Scarborough and East York

* Adjusted for deletions and late reports.

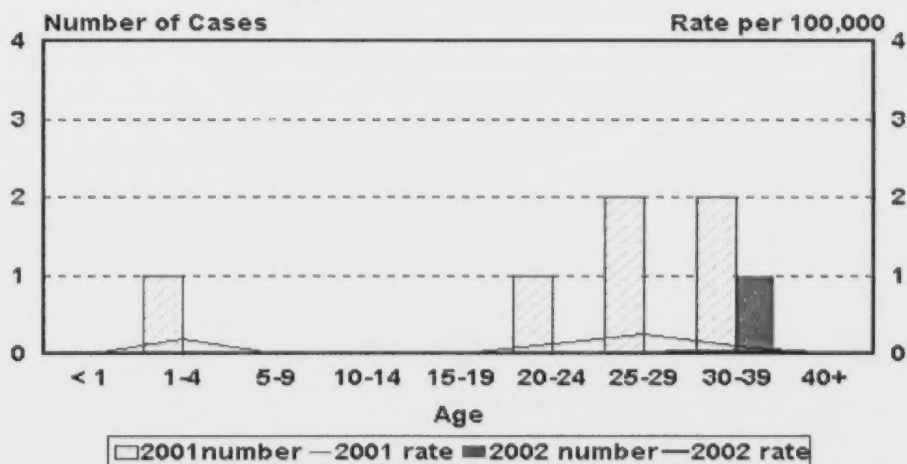
Vaccine Preventable and Other Diseases

Measles by Month Ontario January-December, 2001 and 2002



Total for 2001 includes "confirmed" and "probable" cases

Measles by Age Ontario January-December, 2001 and 2002



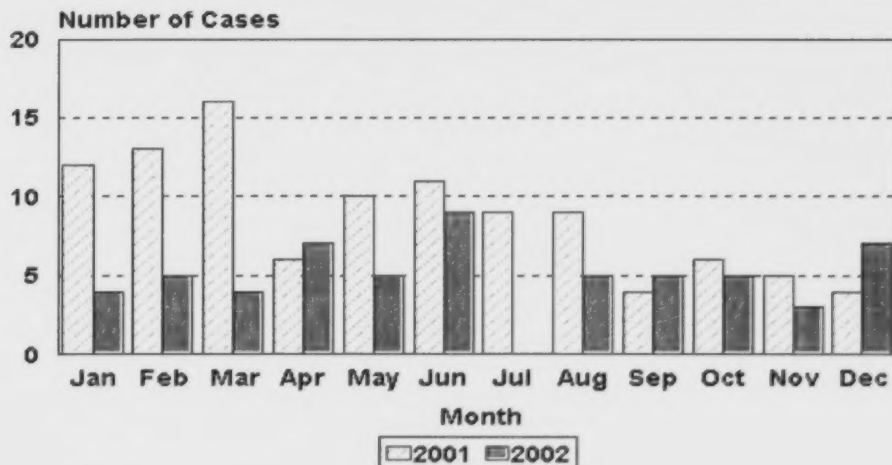
Total for 2001 includes "confirmed" and "probable" cases

Vaccine Preventable and Other Diseases

Meningococcal Disease by Month

Ontario

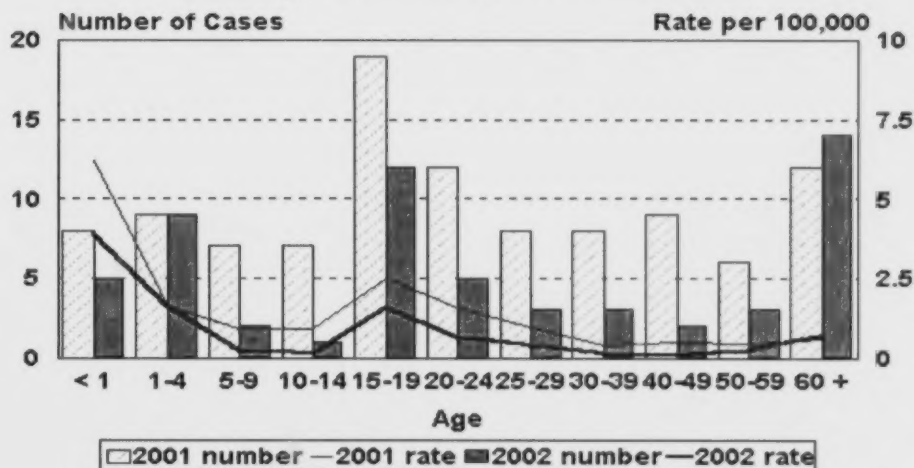
January-December, 2001 and 2002



Meningococcal Disease by Age

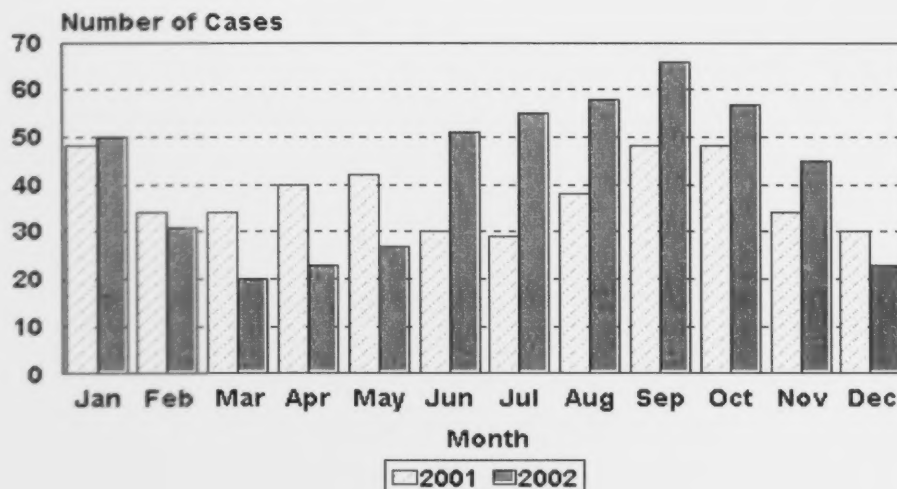
Ontario

January-December, 2001 and 2002

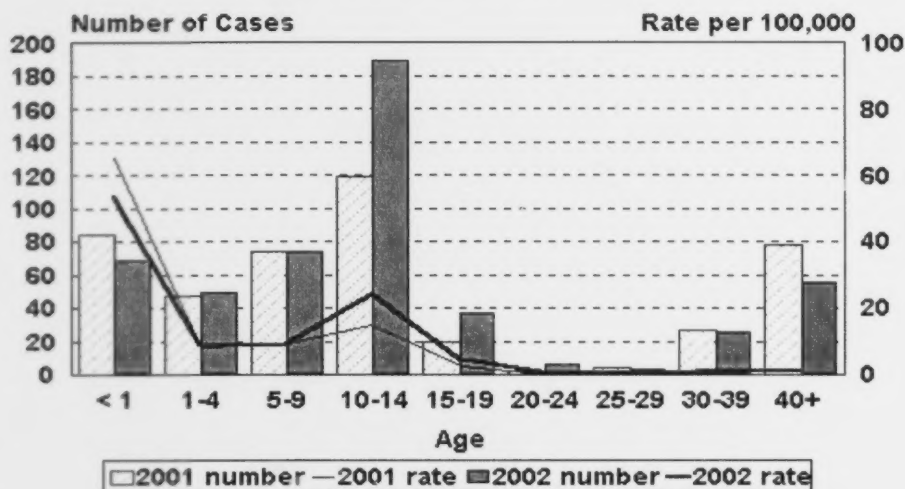


Vaccine Preventable and Other Diseases

Pertussis by Month Ontario January-December, 2001 and 2002



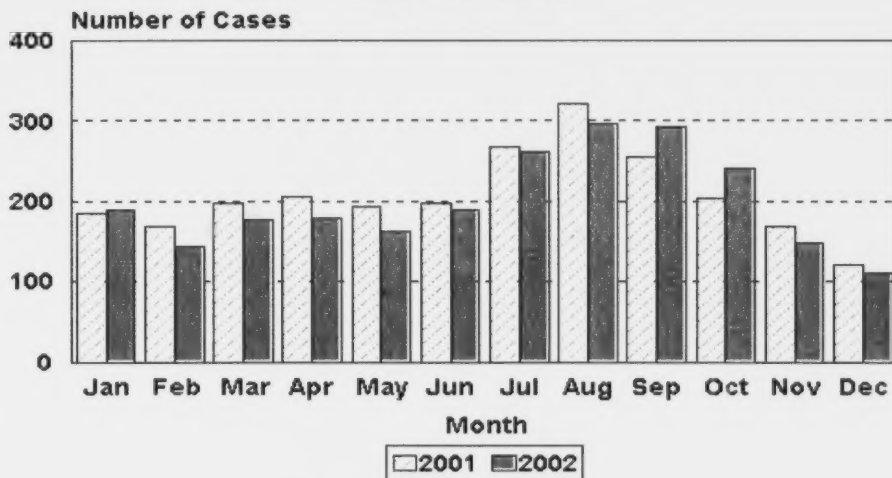
Pertussis by Age Ontario January-December, 2001 and 2002



Enteric Diseases

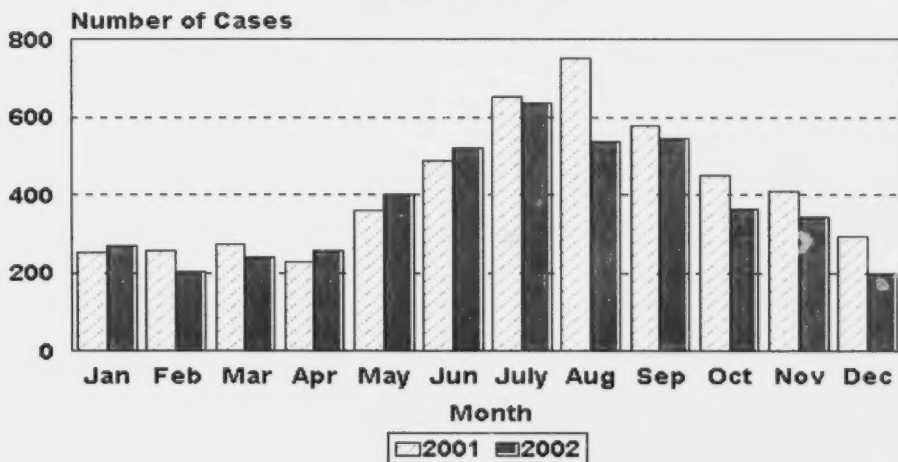
Salmonellosis by Month

Ontario
2001 to 2002



Campylobacter by Month

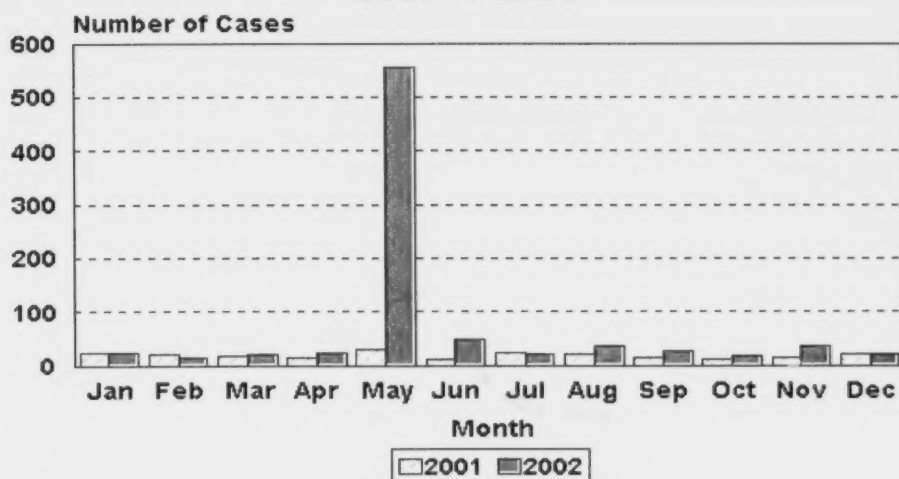
Ontario
2001 to 2002



Enteric Diseases

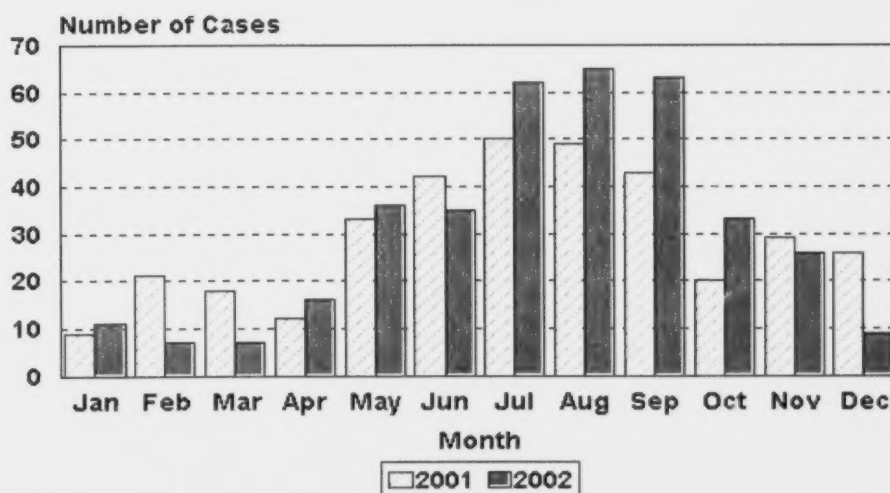
Shigellosis by Month

Ontario
2001 to 2002

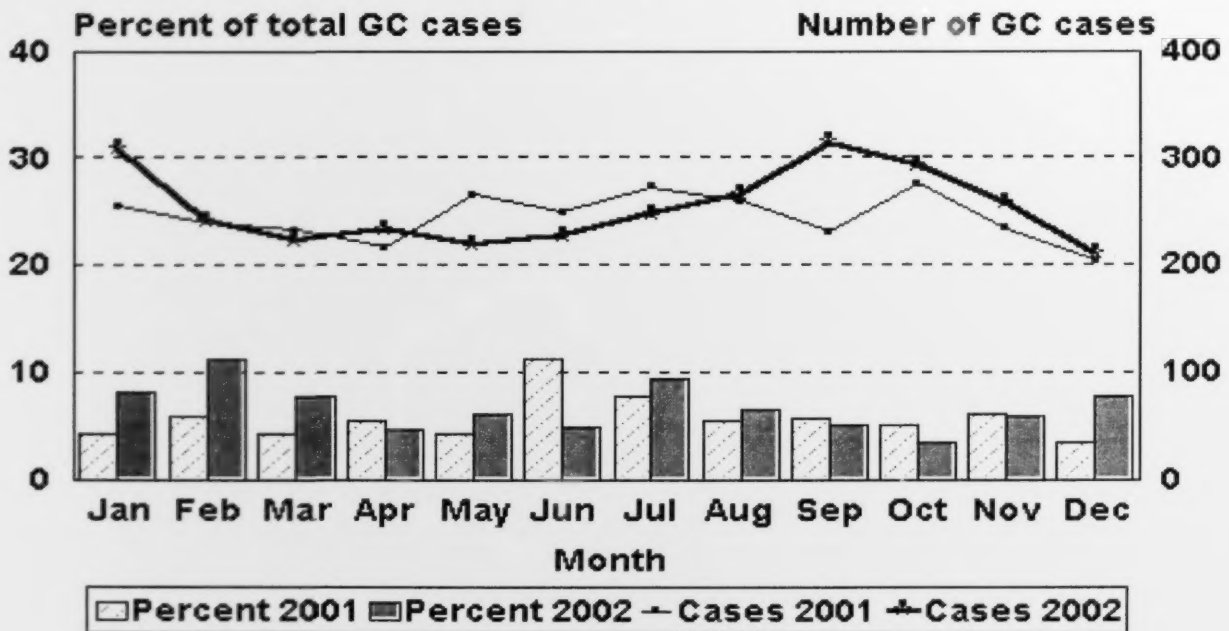


Verotoxin-Producing E. coli Infections

Ontario
2001 to 2002

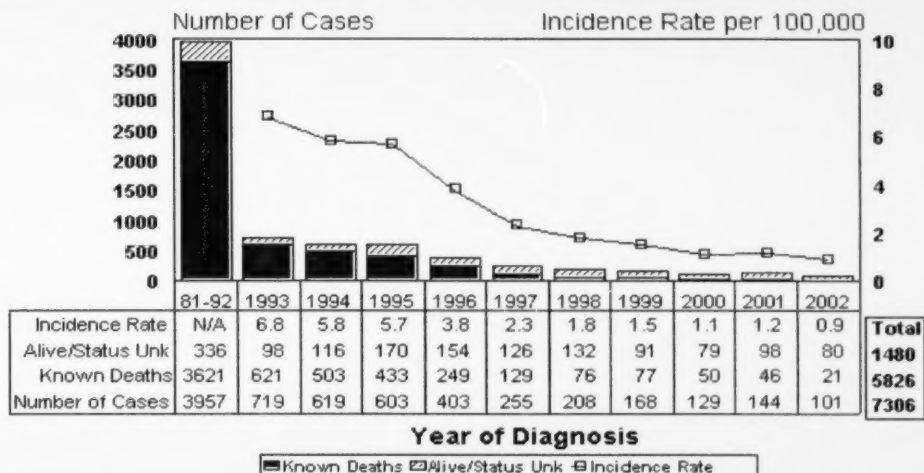


PPNG as a Proportion of Total Gonorrhea Ontario 2001 to 2002



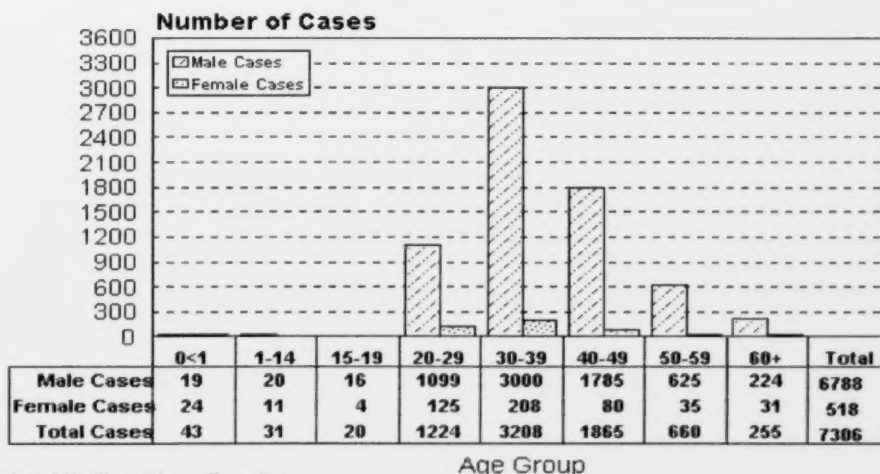
Sexually Transmitted Diseases

AIDS in Ontario Incidence by Year of Diagnosis



Ministry of Health and Long-Term Care
Public Health Branch
Cumulative cases diagnosed to December 31, 2002

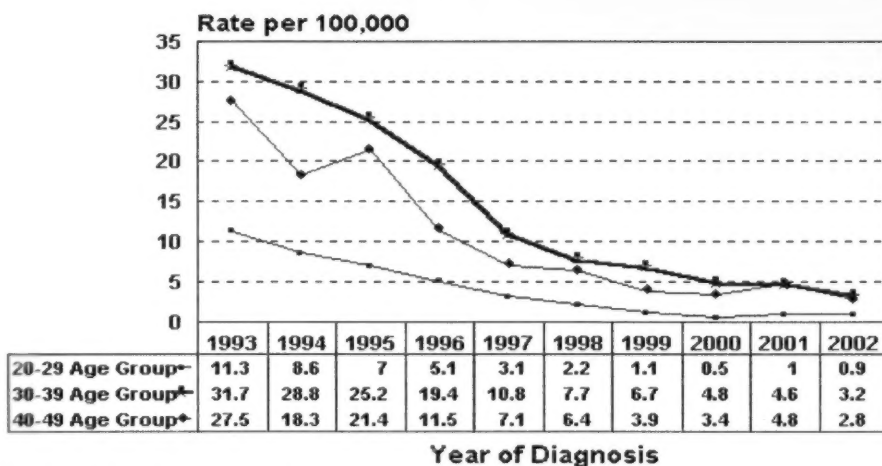
AIDS in Ontario Cases by Age and Sex



Ministry of Health and Long-Term Care
Public Health Branch
Cumulative cases diagnosed to December 31, 2002

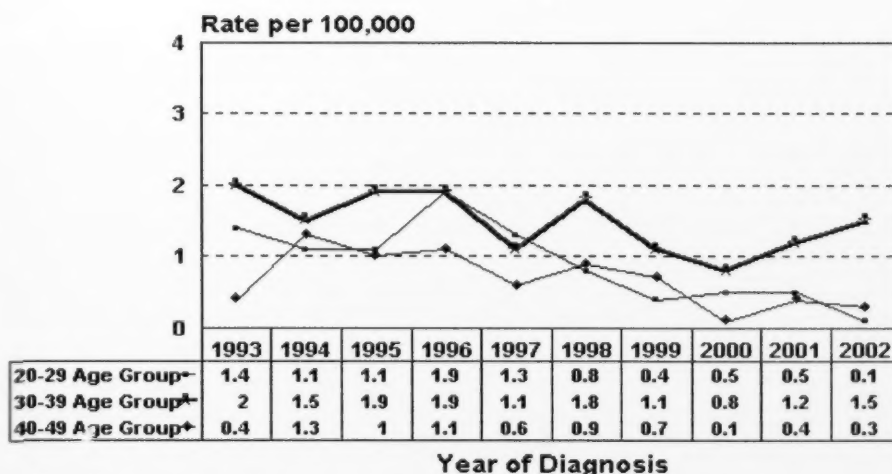
Sexually Transmitted Diseases

Males AIDS Rates for Selected Age Group Ontario, 1993-2002



Ministry of Health and Long-Term Care
Public Health Branch
Cumulative cases diagnosed to December 31, 2002

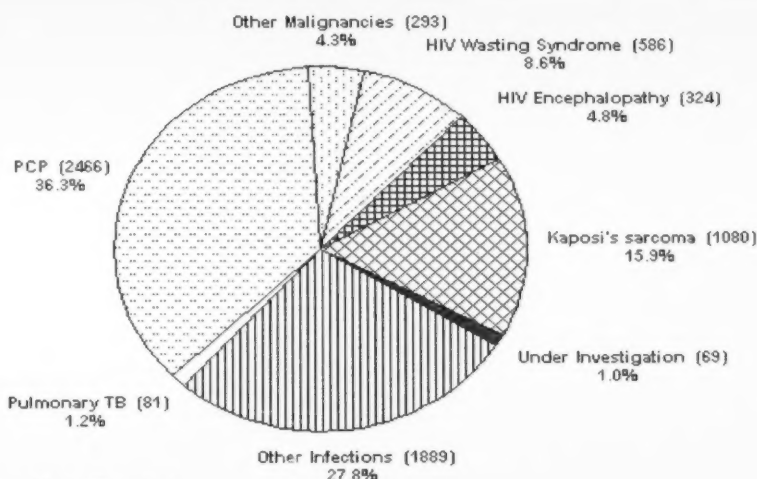
Females AIDS Rates for Selected Age Group Ontario, 1993-2002



Ministry of Health and Long-Term Care
Public Health Branch
Cumulative cases diagnosed to December 31, 2002

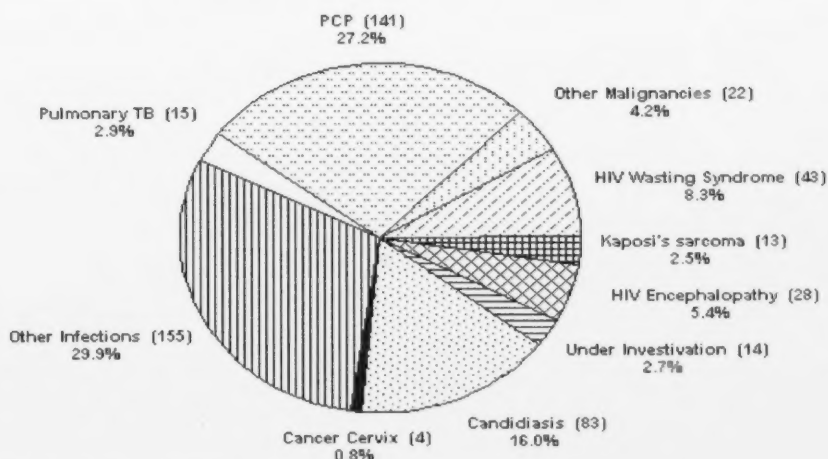
Sexually Transmitted Diseases

AIDS in Ontario Primary Disease for Males



n= 6788
Ministry of Health and Long-Term Care
Public Health Branch
Cumulative cases diagnosed to December 31, 2002

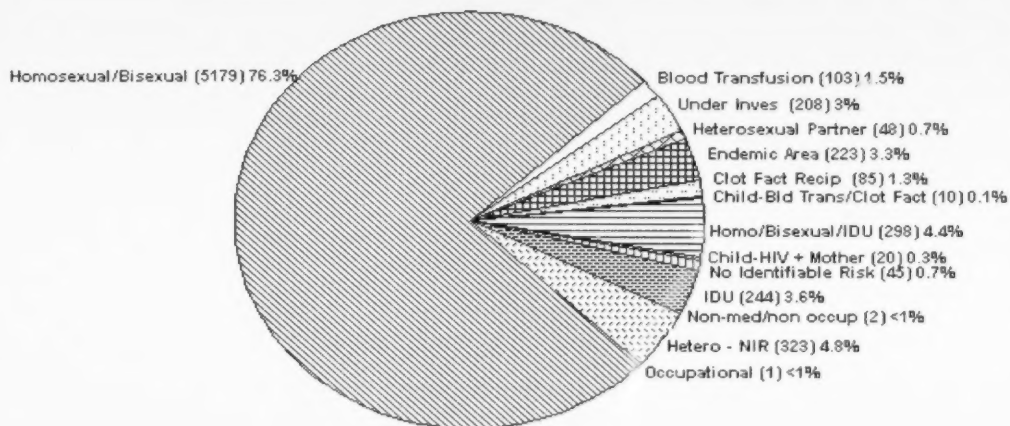
AIDS in Ontario Primary Disease for Females



n= 518
Ministry of Health and Long-Term Care
Public Health Branch
Cumulative cases diagnosed to December 31, 2002

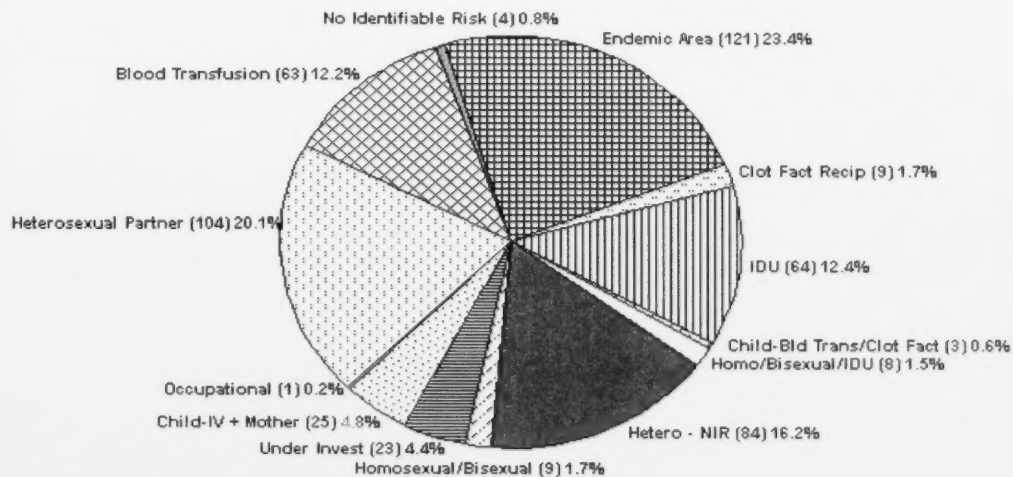
Sexually Transmitted Diseases

AIDS in Ontario Risk Exposure Categories for Males



n= 6788
Ministry of Health and Long-Term Care
Public Health Branch
Cumulative cases diagnosed to December 31, 2002

AIDS in Ontario Risk Exposure Categories for Females



n= 518
Ministry of Health and Long-Term Care
Public Health Branch
Cumulative cases diagnosed to December 31, 2002

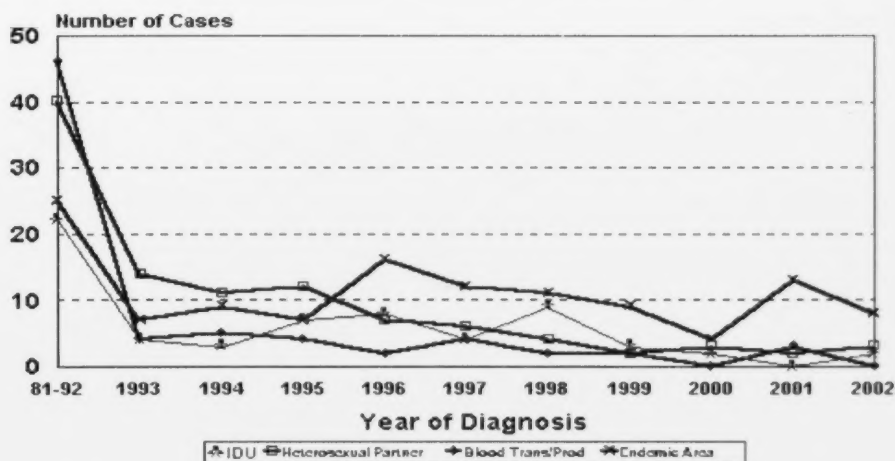
Sexually Transmitted Diseases

AIDS Risk Exposure by Year in Males Ontario, 1981- 2002

| Risk Exposure | 81-92 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | Totals |
|---------------------------|-------|------|------|------|------|------|------|------|------|------|------|--------|
| Homosexual/Bisexual | 3067 | 518 | 450 | 403 | 241 | 148 | 110 | 84 | 62 | 57 | 39 | 5179 |
| IDU | 90 | 24 | 20 | 25 | 22 | 14 | 8 | 12 | 12 | 11 | 6 | 244 |
| Homo/Bisexual/IDU | 154 | 34 | 34 | 31 | 19 | 7 | 7 | 3 | 4 | 3 | 2 | 298 |
| Clot Fact Recip | 54 | 7 | 3 | 10 | 3 | 3 | 2 | 1 | 0 | 1 | 0 | 84 |
| Endemic Area | 64 | 15 | 12 | 17 | 27 | 17 | 14 | 15 | 10 | 17 | 15 | 223 |
| Heterosexual Partner | 17 | 8 | 5 | 3 | 2 | 2 | 4 | 1 | 2 | 3 | 1 | 48 |
| Blood Transfusion | 73 | 4 | 4 | 6 | 3 | 4 | 4 | 1 | 3 | 1 | 0 | 103 |
| Occupational (possible) | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Child-HIV + Mother | 8 | 1 | 2 | 3 | 3 | 2 | 0 | 0 | 1 | 0 | 0 | 20 |
| Child-Bld Trans/Clot Fact | 9 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| Hetero-NIR | 116 | 37 | 24 | 38 | 25 | 18 | 13 | 15 | 14 | 16 | 7 | 323 |
| No Identifiable Risk | 33 | 2 | 3 | 3 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 45 |
| Under Investigation | 92 | 27 | 17 | 18 | 12 | 9 | 4 | 9 | 4 | 8 | 8 | 208 |
| Non-med/non occup | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 2 |

Ministry of Health and Long-Term Care
Public Health Branch
Cumulative cases diagnosed to December 31, 2002

AIDS in Ontario Selected Risk Factors for Females



Ministry of Health and Long-Term Care
Public Health Branch
Cumulative cases diagnosed to December 31, 2002

AIDS in Ontario

Number of Cases per Health Unit Area
of Residence at time of Onset/Diagnosis

| Responsible Health Unit | Number | Per cent |
|----------------------------|--------|----------|
| Algoma | 12 | 0.2% |
| Brant County | 32 | 0.4% |
| Grey-Bruce | 27 | 0.4% |
| Durham Region | 110 | 1.5% |
| Eastern Ontario | 32 | 0.4% |
| Elgin-St. Thomas | 13 | 0.2% |
| Haldimand-Norfolk | 21 | 0.3% |
| Haliburton, Kawartha | 18 | 0.2% |
| Halton Region | 91 | 1.2% |
| City of Hamilton | 206 | 2.8% |
| Hastings & Prince Edward | 50 | 0.7% |
| Huron County | 11 | 0.2% |
| Chatham-Kent | 25 | 0.3% |
| Kingston, Frontenac | 73 | 1.0% |
| Lambton | 28 | 0.4% |
| Leeds, Grenville & Lanark | 28 | 0.4% |
| Middlesex-London | 234 | 3.2% |
| Muskoka-Parry Sound | 16 | 0.2% |
| Niagara Region | 136 | 1.9% |
| North Bay & District | 31 | 0.4% |
| Northwestern | 9 | 0.1% |
| Ottawa | 620 | 8.5% |
| Oxford County | 22 | 0.3% |
| Peel Region | 275 | 3.8% |
| Perth District | 18 | 0.2% |
| Peterborough | 35 | 0.5% |
| Porcupine | 11 | 0.2% |
| Renfrew County & District | 17 | 0.2% |
| Simcoe | 81 | 1.1% |
| Sudbury and District | 66 | 0.9% |
| Thunder Bay District | 37 | 0.5% |
| Timiskaming | 9 | 0.1% |
| Toronto City - total | 4438 | 60.7% |
| North | 271 | 3.7% |
| South | 3474 | 47.5% |
| East | 390 | 5.3% |
| West | 303 | 4.1% |
| Waterloo Region | 86 | 1.2% |
| Wellington-Dufferin-Guelph | 54 | 0.7% |
| Windsor-Essex County | 202 | 2.8% |
| York Region | 132 | 1.8% |
| Totals | 7,306 | 100.0% |

Ministry of Health and Long-Term Care
Public Health Branch
Cumulative cases diagnosed to December 31, 2002

**Reportable Disease Summary for First Nations and Inuit Health Branch
Ontario Region, October 1 - December 31, 2002**

| DISEASE | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | Total |
|------------------------|---|----|---|----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Chickenpox (Varicella) | 8 | 16 | 3 | 17 | | | 1 | | | | | | | | | | | | | | 45 |
| Giardiasis | | | | | | | | | | | 1 | | | | | | | | | 1 | 2 |
| Group A Streptococcal | 1 | | | | | | | | 1 | | | | | | | | | | | | 2 |
| Salmonellosis | | | | | | | | | | | | | | | | 1 | | | | | 1 |

On-Reserve Population for MSB - Ontario Region = 68,847

**Reportable Disease Summary for First Nations and Inuit Health Branch
Ontario Region, October 1 - December 31, 2002**

| DISEASE | 0 - 4 | | 5 - 9 | | 10 - 14 | | 15 - 19 | | 20 - 24 | | 25 - 29 | | 30 - 39 | | 40 - 49 | | 50 - 59 | | 60 or (61-103) | | Total |
|-----------------------------|-------|----|-------|----|---------|---|---------|---|---------|---|---------|---|---------|---|---------|---|---------|---|----------------|---|-------|
| | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | |
| Campylobacter Infection | | | 1 | | 2 | | | | | | | | | | | | | | | | 3 |
| Chickenpox (Varicella) | 8 | 16 | 3 | 17 | | | 1 | | | | | | | | | | | | | | 45 |
| Flammylike Typhus Infection | | | | | | | 5 | 8 | 1 | 2 | 1 | 6 | 5 | 7 | | 3 | | | | | 104 |
| Giardiasis | | | | | | | | | | | 1 | | | | | | | | 1 | | 2 |
| Group A Streptococcal | | | | | | | | | | | | | 1 | | | | | | | | 1 |
| Group B Streptococcal | 1 | | | | | | | | 1 | | | | | | | | | | | | 2 |
| Hepatitis A | | | | | | | | | | | | | | | | | | | | | 1 |
| Salmonellosis | | | | | | | | | | | | | | | | 1 | | | | | 1 |
| Tuberculosis | | | | | | | | | | | | | | | | | | | | | 1 |

On-Reserve Population for MSB - Ontario Region = 68,847

*Just walking to
the grocery Store...*



*Even a little
regular physical
activity makes a
healthy difference!*



